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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,507	06/23/2003	Eric A. Merz	114943	8660
25944	7590	07/28/2004		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER DUDDING, ALFRED E	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,507

Applicant(s)MERZ, ERIC A. **Examiner**

Alfred E. Dudding

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 13-16, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 4-10, 12 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/23/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in line 2, the word 'container' has no antecedent basis. For the purpose of examination of this application, the term 'container' will be considered as equivalent to a printhead with integral ink reservoir.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 11, 13 – 16, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Murthy (U.S. 6,076,912 A).

Murthy discloses a fluid ejector assembly, and a method of manufacturing the fluid ejection assembly, Figure 4A (clearly seen), comprising a heat sink, Figure 4A, element 100, attached to the container, Figure 4A, element 102, the heat sink including a portion molded from a polymer having at least one thermally conductive filler material, Column 3, lines 42 – 44, the portion shaped to dissipate heat; and a fluid ejector module attached to the heat sink, Figure 4A, elements 140 – 144. Murthy discloses that the heat sink includes a plurality of fins extending out from the portion, Figure 4A, clearly seen, Column 3, lines 16 – 18. Murthy teaches that the heat sink is chemically resistant to a fluid ejected by the fluid ejector module, Column 3, lines 38 –

Art Unit: 2853

42. Murthy discloses that the fluid ejector assembly includes a container that stores a fluid to be ejected by the fluid ejection module, Figure 4A, element 102 (cartridge holder).

4. Claims 1, 3, 15, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto (JP 02187350 A).

Murthy discloses a fluid ejector assembly, and a method of manufacturing the fluid ejection assembly, Figure 1 element 1, comprising a heat sink, Figure 1, element 3, attached to the container (the wall of the ink tank is the heat sink, see Abstract), the heat sink including a portion molded from a polymer having at least one thermally conductive filler material, Abstract, the portion shaped to dissipate heat; and a fluid ejector module attached to the heat sink, Figure 1, clearly seen. Because the ejector assembly and the ink tank (reservoir) are made from the same materials, and therefore integral to each other, therefore the coefficients of thermal expansion are the same.

Allowable Subject Matter

5. Claims 4 – 10, 12, and 17 – 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

a. A search of prior art did not cite a fluid ejector assembly wherein the polymer having at least one thermally conductive filler material has a thermal conductivity greater than about 10 W/m °C as claimed in the limitations of claims 4 and 17.

b. A search of prior art did not cite a fluid ejector assembly wherein the polymer having at least one thermally conductive filler material has a thermal conductivity less than about 100

Art Unit: 2853

W/m °C as claimed in the limitations of claims 5, 6, 18, and 19.

c. A search of prior art did not cite a fluid ejector assembly wherein at least one thermally conductive filler material is graphite as claimed in the limitations of claims 7 and 8.

d. A search of prior art did not cite a fluid ejector assembly wherein at least one thermally conductive material is at least one ceramic material as claimed in the limitations of claims 9 and 10.

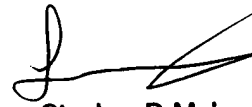
e. A search of prior art did not cite a fluid ejector assembly wherein the at least one thermally conductive filler material is oriented substantially parallel to an oriented flow area of the fluid ejector module as claimed in the limitations of claims 12 and 20.

Art Unit: 2853

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Dudding whose telephone number is (571) 272-2144. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, AU 2853, can be reached at (571) 272 - 2149. The fax phone number for this Group is are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0956.


Stephen D. Meier
Primary Examiner

Alfred Dudding

Q A

7/14/07